

BIRDS OF THE NORTHEASTERN INTERIOR OF WESTERN AUSTRALIA

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ABSTRACT

This paper is essentially an annotated list of the 148 species of birds recorded from the tropical portion of the Eastern Division of Western Australia. The region consists largely of deserts (the Great Sandy, Tanami and Gibson).

INTRODUCTION

The area covered by this paper is the tropical portion of the Eastern Land Division of Western Australia. It is bounded in the north by the southern boundary of the Kimberley Division (lat. 19°30'S), in the south by the Tropic of Capricorn (lat. 23°26'30"S), in the east by the Northern Territory border (long. 129°00'E), and in the west by the eastern boundary of the North-West Division (which in the north follows long. 121°24'E and in the centre and south the long-abandoned No. 1 Rabbit-proof Fence) (see **Fig. 1**).

As in the 'Birds of the Kimberley Division, Western Australia' (Storr 1980, *Spec. Publs West. Aust. Mus.* No. 11) information is given on local distribution, ecological status, relative abundance, habitat preferences, movements, breeding season (defined by the months in which eggs are laid) and clutch size (prefixed by C for eggs and nestlings, and B for broods that have left the nest but are still dependent, e.g. C/2(3) denotes three records of nests with two eggs or nestlings).

Environment

The region lies entirely within the arid zone. Mean annual rainfall ranges from 32 cm in the northwest to 23 cm in the southeast, 75-90% of it falling from December to May. By the criterion of land-use all of the region is desert except for pastoral holdings in the far northwest (Anna Plains), far northeast (Billiluna, Lake Gregory and Balgo) and far southwest (Talawana). The far east is mostly Aboriginal Reserve.

Much of the region consists of the Great Sandy Desert, which is bordered on the southwest by the Little Sandy Desert, the central south by the Gibson Desert and the east by the Tanami Desert. The prevailing sandplains and

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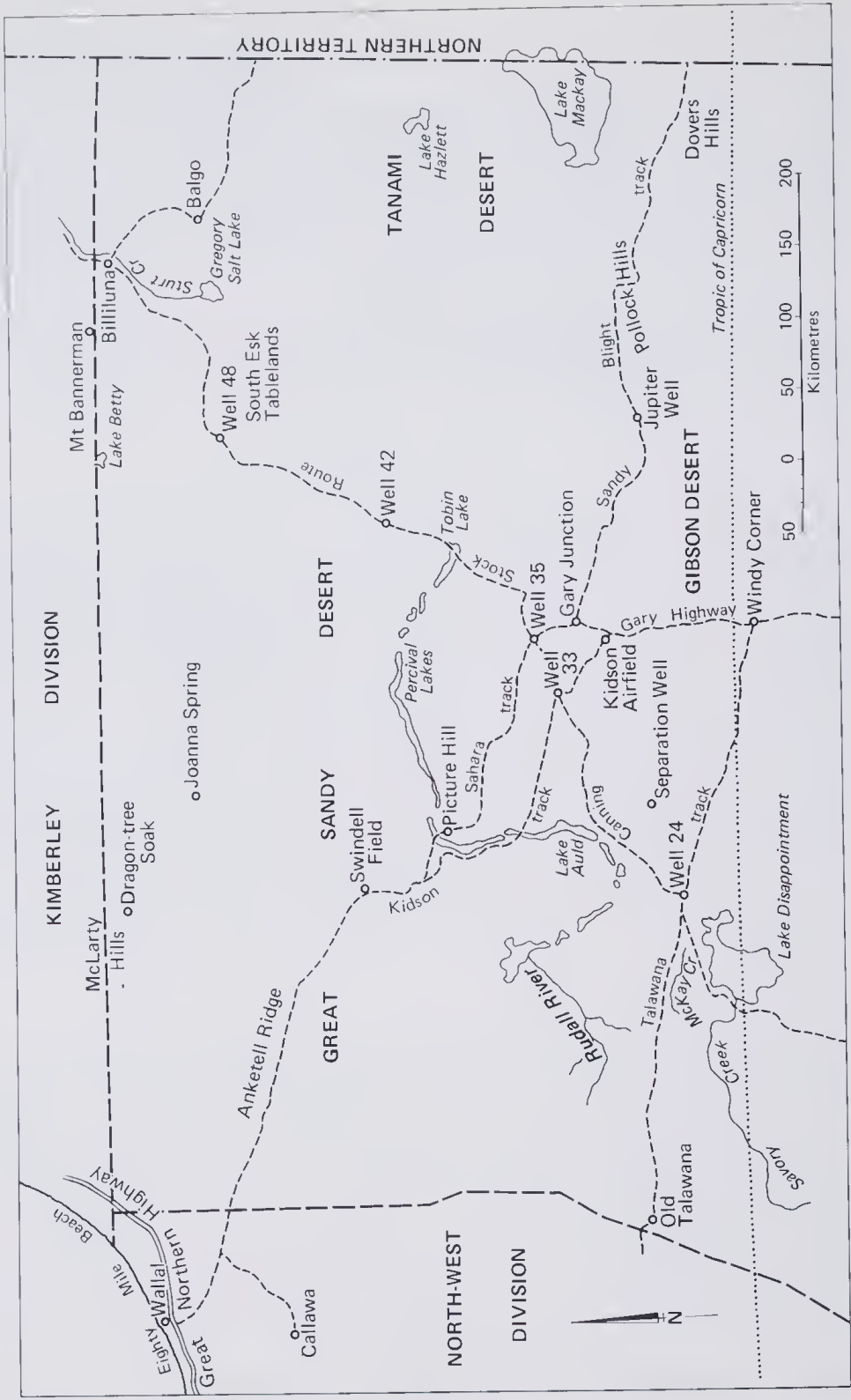


Fig. 1: Map of northeastern interior of Western Australia.

sandridges are interrupted by gravelly uplands such as the South Esk Tablelands, the Anketell Ridge and the Gibson Desert, by numerous salt pans, by the stony ranges of the southwest and the streams that flow out of them (essentially an eastward extension of the Pilbara), and by Sturt Creek and Gregory Salt Lake (in effect a southward extension of the Kimberley).

The vegetation is predominantly a hummock grassland of spinifex (*Triodia* and *Plectrachne* spp.) with scattered shrubs and low trees, especially of the genera *Acacia*, *Hakea*, *Grevillea* and *Eucalyptus*. Locally the trees are denser, as in groves of desert oak (*Casuarina decaisneana*) on interdunal sands or bloodwoods (*Eucalyptus dichromophloia*) along the upper slopes of sandridges. Mulga (*Acacia aneura*) scrubs are largely confined to the Gibson Desert, and teatree thickets (*Melaleuca glomerata* and *M. lasiandra*) to low-lying places. Along the few watercourses of the region the dominant tree is the river gum (*Eucalyptus camaldulensis*). Samphires and other halophytic herbage grow on and around the salt pans.

For a detailed account of the climate, physiography, soils and vegetation of the region see Beard & Webb (1974).

Sources of data

Until recently most of the region was inaccessible except to large expeditions equipped with camels. Only a little information on birds can be gleaned from the accounts of explorers. A.C. Gregory followed Sturt Creek down to Gregory Salt Lake in March 1856, and his brother F.T. Gregory penetrated the Great Sandy Desert for a few kilometres east of the Gregory Range in September 1861; they published their journals in 1884. P.E. Warburton crossed the northern part of the region from east to west in August-December 1872 (Warburton 1875). D.W. Carnegie crossed the eastern part of the region from south to north in September-November 1896 (Carnegie 1898).

The disastrous Calvert Expedition crossed the western part of the region from south to north in October 1896. The ornithologist G.A. Keartland accompanied them but had to abandon his collections in the desert. Extracts from Keartland's field notes and descriptions of the birds he obtained at Joanna Spring in April 1897 were published by North (1898).

Western Australian Museum preparator O.H. Lipfert collected along the Canning Stock Route from April 1930 to April 1931; his bird skins were shared between the Western Australian and South Australian Museums. From April 1943 to March 1944 ornithologist K.G. Buller worked on the Canning Stock Route between Old Billiluna and Well 23; his collection of bird skins and a copy of his diary are lodged in the Western Australian Museum. Naturalist J.H. Calaby visited the Rudall River in September 1955; he kindly gave me a copy of his bird notes. Anthropologist D.F. Thomson visited the far east of the region in 1957 but seldom mentioned the birds (Thomson 1962).

In the last 15 years the numerous roads and tracks made by surveyors and

oil-prospectors have enabled several ornithologists to visit the region. In September 1966 J.R. Ford and G.M. Storr travelled north along the Gary Highway to Well 35, returning via the Talawana track. In early December 1970 T. Fletcher visited the Rudall River (Fletcher 1971). In May-June 1971 J.R. Ford, J. Dell and G. Chapman traversed the entire south of the region via the Sandy Blight and Talawana tracks. In August-September 1972 W.H. Butler collected birds in the far southwest for the American Museum of Natural History. In July 1973 S.J.J.F. Davies travelled to Well 35 via the Talawana track, returning via the Kidson track; Dr Davies also gave me a copy of the notes made by the late Noel Ives along the Sahara track and around Kidson Airfield in August 1974. In August 1973 J.R. Ford, R.E. Johnstone and G. Lodge worked along the Sandy Blight track and Gary Highway. In August 1976 P. de Rebeira visited Well 34 via the Talawana track and Gary Highway; on the return journey he visited the Rudall River. In August 1977 N.L. McKenzie and P.J. Fuller visited by helicopter the McLarty Hills, Dragon-tree Soak and a point on the Kidson track (ca 20°25'S, 122°10'E). In September 1977 P. de Rebeira and I. Rook travelled north along the Gary Highway to Well 35 and returned via the Sahara track. In November 1977 L.A. Smith and R.E. Johnstone visited Gregory Salt Lake (Smith & Johnstone 1978). In September 1978 D.A. Saunders and P. de Rebeira crossed the region from south to north via the Gary Highway and Billiluna track. In April-May 1979 A.N. Start, N.L. McKenzie, W.K. Youngson and A.A.E. Williams visited the Rudall River and worked along the Talawana track, Gary Highway and Kidson track. In the same period R.E. Johnstone, L.A. Smith, A.A. Burbidge and P.J. Fuller worked the country around Balgo and Gregory Salt Lake and along the Billiluna and Kidson tracks. A.A. Burbidge and P.J. Fuller revisited Gregory Salt Lake in late May and early June 1980, when the lake was half full; they also visited the country between Balgo and Point Moody. I am very grateful to all these gentlemen for their notes, which were almost entirely unpublished.

LIST OF BIRDS

Casuariidae

Dromaius novaehollandiae (Latham)

Emu

Almost entirely southern and eastern, i.e. absent from most of Great Sandy Desert (only recorded in extreme north at Dragon-tree soak and near Lake Betty). Uncommon in southwest (north to the Rudall and east to McKay Creek), scarce elsewhere; in ones, twos or small parties (up to five). Mainly vicinity of fresh water (claypans, river pools, desert soaks) but also mulga country of Gibson Desert; absent from waterless sandy deserts.

Podicipedidae

Podiceps novaehollandiae novaehollandiae Stephens **Black-throated Grebe**

Only recorded in far northeast (Gregory Salt Lake) and southwest (Rudall River). Scarce; in ones, twos or small flocks (up to 10). One breeding report: two pairs with chicks observed by J.H. Calaby on the Rudall in mid-September 1955.

Podiceps poliocephalus Jardine & Selby **Hoary-headed Grebe**

Two records: one observed by P.J. Fuller, R.E. Johnstone *et al.* at mouth of Djaluwon Creek, Gregory Salt Lake, on 26 April 1979; and one observed by A.N. Start *et al.* at Coondegoon Pool, Rudall River, on 30 April 1979.

Pelecanidae

Pelecanus conspicillatus Temminck **Australian Pelican**

Only recorded in far northeast. The explorer D.W. Carnegie (1898: 371) noted pelicans on Gregory Salt Lake in April 1897. L.A. Smith and R.E. Johnstone found them common on Gregory Salt Lake in November 1977 in flocks of up to 200 but saw none here in April 1979 when the Lake was nearly dry. They were very plentiful on Gregory Salt Lake in early winter 1980, when A.A. Burbidge and P.J. Fuller saw flocks of *ca* 1000 and 5000 towards the south end of the lake.

Phalacrocoracidae

Phalacrocorax sulcirostris (Brandt) **Little Black Cormorant**

One record from far northeast: in November 1977 L.A. Smith and R.E. Johnstone found it plentiful in scattered flocks (up to 100) on Gregory Salt Lake when it was half full. They also saw hundreds of old cormorant nests in dead wattles about a kilometre back from the water edge; unfortunately they could find no remains of the birds to identify the species that built them.

Phalacrocorax melanoleucos melanoleucos (Vieillot) **Little Pied Cormorant**

Only recorded from far northeast and southwest. L.A. Smith and R.E. Johnstone saw a few at Gregory Salt Lake on 6 November 1977, and T. Fletcher saw one on a pool in the Rudall in early December 1970.

Anhinga melanogaster novaehollandiae (Gould) **Darter**

Two records from far northeast: several seen by L.A. Smith and R.E. Johnstone at Gregory Salt Lake on 7 November 1977, mostly single birds but also

small parties (up to 6); and one seen there by A.A. Burbidge and P.J. Fuller on 3 June 1980.

Ardeidae

Ardea pacifica Latham

Pacific Heron

Uncommon visitor to relatively well-watered northeast (e.g. a claypan at Billiluna, lower Sturt Creek, Gregory Salt Lake, mouth of Djaluwon Creek, Bulbi Plain and a gully pool near Breaden Valley) and southwest (Coondegoon Pool, Rudall River); usually single, occasionally in twos or threes.

Ardea novachollandiae Latham

White-faced Heron

Scarce visitor to relatively well-watered northeast (lower Sturt Creek, Gregory Salt Lake and freshwater lagoons near Lake Betty) and southwest (Coondegoon Pool and Talbot Soak, Rudall River); in ones, twos or small flocks (7).

Egretta alba alba (Linnaeus)

Great Egret

Visitor to far northeast. In November 1977 L.A. Smith and R.E. Johnstone observed four single birds and a flock of 17 on Gregory Salt Lake; in April 1979 they saw one on Sturt Creek 11 km upstream from its mouth. In June 1980 A.A. Burbidge and P.J. Fuller saw 8 at Gregory Salt Lake.

Nycticorax caledonicus hilli Mathews

Rufous Night Heron

Vagrant. On 7 May 1979 an adult was flushed by A.N. Start and N.L. McKenzie from a dense clump of bloodwoods at Well 30.

Ciconiidae

Ephippiorhynchus asiaticus (Latham)

Black-necked Stork

Rare visitor to far northeast. L.A. Smith and R.E. Johnstone saw one on lower Sturt Creek and one at Gregory Salt Lake on 6-7 November 1977.

Threskiornithidae

Threskiornis spinicollis (Jameson)

Straw-necked Ibis

Rare visitor to far northeast: A.A. Burbidge and P.J. Fuller saw two at Gregory Salt Lake on 1 June 1980. Vagrant elsewhere: on 4 August 1977 N.L. McKenzie observed a flock of nine in a dead mulga on the Kidson track (ca 20°25'S, 122°10'E); the birds remained in the area for about three hours.

Platalea regia Gould

Royal Spoonbill

Scarce visitor to far northeast. L.A. Smith and R.E. Johnstone saw two at Gregory Salt Lake on 7 November 1977; and A.A. Burbidge and P.J. Fuller saw one there on 1 June 1980.

Platalea flavipes Gould

Yellow-billed Spoonbill

Scarce visitor to far northeast. On 8 November 1977 L.A. Smith and R.E. Johnstone saw four at a pool on Sturt Creek 18 km SSW of Billiluna; and on 1 June 1980 A.A. Burbidge and P.J. Fuller saw seven at edge of Gregory Salt Lake.

Anatidae

Dendrocygna spp.

Visitor to far northeast. Whistling Ducks were among the abundant wild-fowl on Gregory Salt Lake when Carnegie visited it in April 1896. After dark on 21 April 1979 several Whistling Ducks flew over L.A. Smith and R.E. Johnstone's camp at 24 km W of Balgo; there was much thunderstorm activity to the north.

Cygnus atratus (Latham)

Black Swan

Visitor to far northeast. In early November 1977 L.A. Smith and R.E. Johnstone saw about 400 on Gregory Salt Lake; in late April 1979 when the lake was almost dry, they only found a few birds in the mouths of creeks entering the lake (10 on Sturt Creek and 14 on Djaluwon Creek). Up to 15 birds were observed by A.A. Burbidge and P.J. Fuller on Gregory Salt Lake in early June 1980. Breeding in small numbers at Gregory Salt Lake in October 1977: C/4(1); B/3(1), 6(1). These observations provide another example of the recent spread of this swan into northern Australia. Just south of the region J.H. Calaby (1958, *West. Aust. Nat.* **6**: 184) found it breeding on Savory Creek in September 1955.

Tadorna tadornoides (Jardine & Selby)

Mountain Duck

Visitor to far northeast. J. McGuire (1967) reported a few in the Balgo area for the quarter ending March 1967. On 26 April 1979 L.A. Smith and R.E. Johnstone saw eight on Sturt Creek 11 km N of its mouth. Just south of our region J.H. Calaby (1958, *West. Aust. Nat.* **6**: 184) observed it on Savory Creek in September 1955.

Anas superciliosa Gmelin

Black Duck

Visitor to relatively well-watered northeast (lower Sturt Creek and Gregory

Salt Lake) and southwest (Rudall River and, just south of our region, Savory Creek); small parties or flocks (up to 200). Breeding at Coondegoon Pool (Rudall River) in March 1979; B/3(1), 8(1).

Anas gibberifrons gracilis Buller

Grey Teal

Common visitor to relatively well-watered northeast (Gregory Salt Lake and lagoons near Lake Betty) and southwest (Rudall River and, just south of our region, Savory Creek); in flocks (sometimes many thousands). Much the most abundant duck in the region. Breeding on the Rudall in July and August 1955.

Malacorhynchus membranaceus (Latham)

Pink-eared Duck

Visitor to relatively well-watered northeast and southwest. In January 1969 P. McDonald (1969) reported that Gregory Salt Lake was full of water (30 × 15 miles) and that the abundant waterfowl included Pink-eared Ducks. On 26 April 1979 L.A. Smith and R.E. Johnstone saw two flocks (*ca* 100 and 20) on lower Sturt Creek. On 31 May 1980 A.A. Burbidge and P.J. Fuller saw *ca* 50 at Gregory Salt Lake. On 30 April 1979 A.N. Start *et al.* saw two at Coondegoon Pool, Rudall River.

Aythya australis (Eyton)

Hardhead

Two records from far northeast: a flock of six observed by L.A. Smith and R.E. Johnstone at Gregory Salt Lake on 7 November 1977, and a flock of six observed there by A.A. Burbidge and P.J. Fuller on 1 June 1980.

Chenonetta jubata (Latham)

Wood Duck

Visitor to relatively well-watered northeast and southwest. J. McGuire (1967) reported them as common in the Balgo area during the quarter ending March 1967. A.A. Burbidge and P.J. Fuller observed four at Gregory Salt Lake on 1 June 1980. J.H. Calaby noted it on the Rudall in mid-September 1955, and T. Fletcher in December 1970. J.R. Ford heard them flying over Old Talawana on the night of 7 June 1971.

Accipitridae

Elanus caeruleus notatus Gould

Black-shouldered Kite

Rare visitor or transient. A.A. Burbidge and P.J. Fuller saw one in spinifex country 14 km S of Balgo on 9 June 1980. On the Canning Stock Route in 1943 K.G. Buller found a mummified specimen south of Well 43 on 28 September and collected a solitary male near Well 33 on 17 December. P. de Rebeira observed one at 35 km W of Windy corner on 16 August 1976 and one in the Breaden Valley on 19 September 1978. A.N. Start *et al.* saw one on the Anketell Ridge (20°24'S, 122°07'E) on 15 May 1979.

Hamirostra melanosternon (Gould)

Black-breasted Kite

Scarce. A few widespread sightings of single birds in April, May, June, August and November.

Haliastur sphenurus (Vieillot)

Whistling Kite

Uncommon in northeast about water (recorded at a lagoon near Lake Betty, Old Billiluna, lower Sturt Creek and Djaluwon Creek); scarce or absent elsewhere; in ones or twos.

Milvus migrans affinis Gould

Black Kite

Moderately common in northeastern pastoral country (Billiluna, Lake Gregory and Balgo Stations), usually in small flocks, occasionally in large flocks (e.g. about 200 counted in a paddock by P. de Rebeira at 9 km S of Billiluna HS on 20 August 1978), from which it extends in small numbers to the relatively well-watered South Esk Tablelands. When the Canning Stock Route was operational the kites followed the cattle further south; K.G. Buller observed them in ones and twos at Wells 45 and 43 in September and October 1943, and was told by a drover that they sometimes followed the cattle right to Wiluna. Also recorded from southwest: three birds observed by T. Fletcher on the Rudall River in December 1970.

Accipiter fasciatus fasciatus (Vigors & Horsfield)

Brown Goshawk

Largely confined to relatively well-watered northeast and southwest. Moderately common, at least in winter, on the South Esk Tablelands (e.g. K.G. Buller found many of them on 13 August 1943 preying on the thousands of finches watering at Kunningarra Rock-hole) but generally scarce; usually single, occasionally in twos or more. Almost invariably at freshwater: rock-holes, river pools and even desert soaks (Keartland shot one at Joanna Spring).

The only extant specimen from the region is a female (WAM A16058) collected by L.A. Smith and R.E. Johnstone as it preyed on lizards (*Lophognathus longirostris*) on the trunks of eucalypts around a freshwater lagoon near Lake Betty (19°39'S, 126°13'E); it, and presumably all the other birds recorded in the region, belonged to the nominate race.

Accipiter cirrocephalus cirrocephalus (Vieillot)

Collared Sparrowhawk

Status uncertain. Four autumn-winter sight records including observation by J.R. Ford and G.A. Lodge of two birds on 21 August 1973 near a rock-hole in the Pollock Hills; they were presumably preying on finches.

Aquila morphnoides morphnoides Gould

Little Eagle

Status uncertain. Several observations of single birds, mainly in better-watered country, none in sandy deserts.

Aquila audax (Latham)

Wedge-tailed Eagle

Widespread but now scarce; usually single. On 29 May 1971 J.R. Ford observed a bird sitting on a nest near Well 35. On 13 May 1979 A.N. Start *et al.* found a nest, presumably of this species, on the Anketell Ridge (20°24'S, 122°07'E); no birds were seen, but there were green leaves in the nest. In April 1979 L.A. Smith and R.E. Johnstone saw an old nest on Sturt Creek 12 km upstream from its mouth.

Before the catastrophic decline of hare and nail-tailed wallabies these eagles were evidently much more plentiful; G.A. Keartland (*in North*, 1898: 166) wrote 'in crossing the desert they were frequently seen pursuing the little wallabies so common in the sandhills'. Moreover, the introduced rabbit is scarce or absent in these northern deserts (at Well 42 in October 1943 K.G. Buller saw an eagle over a grassy flat 'apparently on the lookout for a rabbit').

Circus assimilis Jardine & Selby

Spotted Harrier

Widespread but uncommon; usually single, occasionally in twos. Possibly a little south of our region, L.A. Wells collected two slightly incubated eggs on 25 September 1896 (G.A. Keartland, *in North*, 1898: 127).

Circus aeruginosus approximans Peale

Marsh Harrier

One record from far northeast: on 2 June 1980 A.A. Burbidge and P.J. Fuller saw one flying low over the trees and scrub fringing Gregory Salt Lake.

Falconidae

Falco peregrinus macropus Swainson

Peregrine Falcon

Status uncertain. Three records of single birds from the vicinity of water: on 26 April 1979 L.A. Smith and R.E. Johnstone saw a female on Sturt Creek 11 km upstream from its mouth; on 13 July 1943 K.G. Buller collected a female (WAM A5825) at Kunningarra Rock-hole (South Esk Tablelands); and on 12-13 September 1966 J.R. Ford and G.M. Storr observed one at a small pool on McKay Creek 56 km W of Well 23 (it had been feeding on galahs for some time, judging from the pile of feathers below its perch in a dead gum).

Falco longipennis longipennis Swainson

Australian Hobby

Rare resident, possibly augmented by winter visitors. On 4 May 1979 L.A. Smith and R.E. Johnstone saw one pursuing a budgerigar over Tobin Lake. In December 1970 T. Fletcher regularly saw two at the Rudall River. On 20 August 1973 R.E. Johnstone and J.R. Ford found a pair attending a nest at the top of a bloodwood on the Sandy Blight track 19 km W of the Northern Territory border; these birds were preying on *Turnix velox*; on the same day a single bird was noted 28 km further west. On 2 June 1971 J.R. Ford found one

defending its nest in a river gum on McKay Creek 58 km W of Well 23; two days later he observed one at 64 km E of Old Talawana, and one feeding in flight on a dragonfly 25 km further west.

Falco berigora berigora Vigors & Horsfield

Brown Falcon

Moderately common (among diurnal raptors second in abundance to *F. cenchroides*); usually single, occasionally in twos. All kinds of country including sandy deserts. On 23 August 1948 K.G. Buller saw two pale-phase birds investigating an old nest near Well 48.

Most birds are pale, but a substantial minority are very dark. Extreme colour variants are probably the basis of most, if not all, records of *Falco subniger* Gray and *F. hypoleucos* Gould from the region.

Falco cenchroides cenchroides Vigors & Horsfield

Australian Kestrel

Common in autumn and early winter; much less numerous after June; usually single, occasionally in twos or small parties. All kinds of open or lightly wooded country. In mid-September 1955 J.H. Calaby found a nest in a hollow tree on the Rudall. On 16 September 1977 P. de Rebeira found a nest and three eggs on a ledge above a cave between Well 35 and Picture Hill.

Turnicidae

Turnix velox (Gould)

Little Button-quail

Very common in good years (e.g. 1955 and 1973), but generally uncommon to moderately common; usually single, occasionally in twos or small parties. Open or sparsely wooded country, especially with *Triodia* and other grasses. Breeding from early April to late August; C/3(1), B/1(1), 2(2), 3(1).

Gruidae

Grus rubicundus (Perry)

Brolga

Confined to far northeast. At Gregory Salt Lake very common in wet years (e.g. 1977) in flocks of up to 150, moderately common in dry years (e.g. 1979); also observed in claypans in the Lake Betty district and at pools on lower Sturt Creek.

Rallidae

Gallinula ventralis Gould

Black-tailed Native Hen

Only recorded in relatively well-watered northeast (single specimens collected by O.H. Lipfert at Sturt Creek and Well 48 in January and March 1931) and southwest (one observed in April 1979 by A.N. Start *et al.* at Coondegoon Pool, Rudall River).

Confined to relatively well-watered northeast (Gregory Salt Lake, lower Sturt Creek and freshwater lagoons near Lake Betty) and southwest (fresh waters along the Telfer access road and, just south of our region, pools on Savory Creek). Non-breeding visitor, sometimes in large numbers. In November 1977, when Gregory Salt Lake was half full, L.A. Smith and R.E. Johnstone saw a flock of *ca* 5000; in April 1979 when the lake was almost dry they only counted 12 birds.

Otididae

Otis australis Gray

Australian Bustard

Locally and seasonally common (e.g. Balgo area in early 1967 and the Rudall River in December 1970) when abundant green herbage builds up numbers of grasshoppers and other insects, but generally uncommon to moderately common; usually in ones or twos, occasionally in threes or small flocks (up to 21). Widespread but preferring better-watered country (e.g. the northeast and southwest) to sandy deserts. Breeding in July and August; B/1(2).

Charadriidae

Vanellus miles miles (Boddaert)

Masked Plover

Visitor to far northeast in good seasons, e.g. early November 1977 when L.A. Smith and R.E. Johnstone saw four single birds and parties of five and eleven at Gregory Salt Lake.

Vanellus tricolor (Vieillot)

Banded Plover

Two winter records from far south: on 20 August 1973 R.E. Johnstone and J.R. Ford found a pair with two small young on a grassy flat beside the Sandy Blight track 70 km W of Northern Territory border; in early June 1971 J.R. Ford heard and saw single birds near Old Talawana.

Charadrius ruficapillus Temminck

Red-capped Plover

Three records from far northeast. On 6 November 1977 L.A. Smith and R.E. Johnstone found it fairly common at Gregory Salt Lake; on 17 April 1979 they saw a flock of about 50, including five immatures, at the edge of a freshwater lagoon near Lake Betty (19°39'S, 126°13'E) and collected one of them. On 3 June 1980 A.A. Burbidge and P.J. Fuller saw *ca* 250 at Gregory Salt Lake.

Charadrius melanops Vieillot

Black-fronted Plover

Common in the limited habitat available to it; in pairs or small parties. Recorded at a freshwater lagoon near Lake Betty, a claypan at Billiluna, a

bore-overflow near Balgo, Sturt Creek, Gregory Salt Lake, Gravity Lakes, and pools and rock-holes in the Rudall. One breeding report: December; C/3(1).

Charadrius veredus Gould

Oriental Plover

Possibly a regular summer visitor to Gregory Salt Lake and its vicinity, where L.A. Smith and R.E. Johnstone observed flocks of 3-40 in early November 1977. At Well 31 O.H. Lipfert collected a solitary bird on 30 September 1930.

Charadrius cinctus (Gould)

Red-kneed Plover

Two records from far northeast: on 18 April 1979 L.A. Smith and R.E. Johnstone collected a lone bird at the edge of a freshwater lagoon near Lake Betty (19°39'S, 126°13'E), and on 1 June 1980 A.A. Burbidge and P.J. Fuller saw a party of five at the edge of Gregory Salt Lake.

Peltohyas australis (Gould)

Australian Dotterel

Three records from southwest. On 1 May 1979 A.N. Start *et al.* observed three birds on a sparsely vegetated, stony ridge north of the McKay Range; two days later they saw three and five birds on an almost bare, gravelly ridge at Well 24. In December 1970 T. Fletcher saw seven birds on a burnt-out plain near the Rudall River.

Scolopacidae

Tringa nebularia (Gunnerus)

Greenshank

Probably a regular summer visitor to far northeast: single birds and small parties (2-4) observed in mid-April and early November at shallow freshwater lagoons near Lake Betty and at Gregory Salt Lake.

Tringa glareola Linnaeus

Wood Sandpiper

One record from far northeast: on 7 November 1977 L.A. Smith and R.E. Johnstone observed eight feeding on a mat of floating aquatic plants at Gregory Salt Lake.

Tringa hypoleucos Linnaeus

Common Sandpiper

One record from far northeast: on 25 April 1979 L.A. Smith and R.E. Johnstone observed three at a shallow lagoon near the mouth of Sturt Creek.

Calidris ruficollis (Pallas)

Red-necked Stint

Two records from far northeast: on 17 April 1979 L.A. Smith and R.E. Johnstone collected one of 15 birds at the edge of a small freshwater lagoon near

Lake Betty (19°39'S, 126°13'E); nine days later they collected one of three birds at a lagoon near the mouth of Sturt Creek.

Calidris acuminata (Horsfield)

Sharp-tailed Sandpiper

One record from far northeast: on 7 November 1977 L.A. Smith and R.E. Johnstone saw flocks of 6, 10 and 20 at Gregory Salt Lake.

Recurvirostridae

Himantopus himantopus leucocephalus Gould

Black-winged Stilt

Four records from Gregory Salt Lake (far northeast): on 14 January 1931 O.H. Lipfert collected a specimen (SAM B15260) at the 'Sturt overflow'; on 7 November 1977 L.A. Smith and R.E. Johnstone saw flocks of four and 30 on the lake; on 25 April 1979 P.J. Fuller *et al.* observed one on a pool; and on 1 and 3 June 1980 A.A. Burbidge and P.J. Fuller saw two.

Cladorhynchus leucocephala (Vieillot)

Banded Stilt

In mid-1975 the Geological Survey of Western Australia collected pigmented fragments of a few subfossil egg-shells at the Percival Lakes (21°22'S, 124°44'E); they are lodged in the Western Australian Museum (A14440).

Recurvirostra novaehollandiae Vieillot

Red-necked Avocet

Four records from far northeast. O.H. Lipfert collected one on lower Sturt Creek *ca* January 1931. On 17 April 1979 L.A. Smith and R.E. Johnstone observed six on a small freshwater lagoon near Lake Betty (19°39'S, 126°13'E); eight days later they saw three on a shallow lagoon near the mouth of Sturt Creek. On 1 June 1980 A.A. Burbidge and P.J. Fuller saw a flock of 25 at the edge of Gregory Salt Lake.

Burhinidae

Burhinus grallarius (Latham)

Bush Stone-curlew

Only recorded from the southwest: in December 1970 T. Fletcher heard them calling each night at the Rudall River.

Glareolidae

Stiltia isabella (Vieillot)

Australian Pratincole

Three records from far northeast: on 6-7 November 1977 L.A. Smith and R.E. Johnstone saw a few single birds and flocks of four, 10 and 15 at Gregory

Salt Lake; on 23 April 1979 they saw a party of three at 20 km W of Balgo and on 1 June 1980 A.A. Burbidge and P.J. Fuller saw a flock of 16 on a green flat beside Gregory Salt Lake.

Laridae

Larus novaehollandiae novaehollandiae Stephens **Silver Gull**

Possibly an uncommon visitor to Gregory Salt Lake from southeastern Australia. On 25 April 1979 L.A. Smith and R.E. Johnstone collected two from a flock of 20 at the edge of Lera Waterhole. On 3 June 1980 A.A. Burbidge and P.J. Fuller observed 60 birds scattered along the southeastern shore of Gregory Salt Lake.

Sterna nilotica macrotarsa Gould **Gull-billed Tern**

Visitor to far northeast (Gregory Salt Lake). On 6-7 November 1977 L.A. Smith and R.E. Johnstone observed three single birds and five parties of 2-30 and collected one specimen; on 25-26 April 1979 they saw parties of six and 15 and collected a specimen. On 1 June 1980 A.A. Burbidge and P.J. Fuller saw a party of nine.

Sterna caspia Pallas **Caspian Tern**

Visitor to far northeast (Gregory Salt Lake). On 6-7 November 1977 L.A. Smith and R.E. Johnstone observed a single bird and five parties of 2-20. On 26 April 1979 they observed a party of seven. On 1 June 1980 A.A. Burbidge and P.J. Fuller observed two birds and a flock of 60.

Sterna hybrida javanica Horsfield **Whiskered Tern**

Visitor to far northeast (Gregory Salt Lake). On 6-7 November 1977 L.A. Smith and R.E. Johnstone observed three flocks of 10-50, some of which were resting on a floating mat of aquatic herbage. On 25 April 1979 they observed a flock of 30. On 31 May 1980 A.A. Burbidge and P.J. Fuller observed a flock of ca 2000 roosting on inundated samphires near the south-western shore of the lake; they believed that the terns would breed here.

Columbidae

Geopelia cuneata (Latham) **Diamond Dove**

Nomadic. Scarce to common, numbers varying locally with seasonal conditions (e.g. in August 1973 J.R. Ford *et al.* saw a total of 120 birds at 22 different places along the Sandy Blight track; in May 1971 they saw none); in ones, twos and small flocks (up to 30). Lightly wooded grasslands (mainly of *Triodia*) in vicinity of water. Two breeding reports: July and August; C/2(1).

Phaps chalcoptera (Latham)

Common Bronzewing

Uncommon; usually single, occasionally in twos. Vicinity of river pools (Sturt Creek, Rudall River and McKay Creek), rock-holes and desert springs (Dragon-tree Soak).

Phaps histrionica (Gould)

Flock Pigeon

Three records from northeast: on 2 March 1856 A.C. and F.T. Gregory (1884) observed large flocks of pigeons, presumably of this species, feeding on the plains beside Sturt Creek between 19°40' and 19°51'S; on 28 August 1872 P.E. Warburton (1875) recorded a flock on a large black-soil plain about 40 km NE of Bishops Dell; two days later he saw them drinking at Lady Edith Lagoon. Warburton's observation on 1 October 1872 of an immense number of bronze-wings coming in to drink at Joanna Spring surely refers to this species, as does Keartland's observation (*in North* 1898: 183) of 30 bronzewings feeding on a patch of bare ground at Joanna Spring.

Geophaps plumifera Gould

Spinifex Pigeon

Confined to far southwest, north to the Gregory Range and east to the Harbutt Range. Uncommon; in small parties. Rocky country in vicinity of water.

Ocyphaps lophotes (Temminck)

Crested Pigeon

Common in relatively well-watered country; in ones, twos or small parties, larger flocks aggregating at water in early morning or late afternoon. Lightly wooded country.

Psittacidae

Trichoglossus versicolor Lear

Varied Lorikeet

One record from far northeast: on 6 November 1977 L.A. Smith and R.E. Johnstone observed parties of four and six in flowering eucalypts 6 km N of Billiluna (i.e. 2 km S of the Kimberley boundary).

Polytelis alexandrae Gould

Princess Parrot

Patchily distributed in family parties and small flocks in the Great Sandy Desert. In April 1897 G.A. Keartland (*in North* 1898: 130-1, and *in Mathews, Bds Aust.* 6: 275) observed a pair and a flock of 20 near Joanna Spring; the stomach contents of the two birds he collected consisted mainly of *Triodia* seeds. On 6 November 1943 K.G. Buller collected three birds (WAM A5831-3) in a grove of desert oaks (*Casuarina decaisneana*) at Tobin Lake; their stomach contents consisted entirely of wattle seeds. Buller also observed a few at Well

37 on 27 November 1943, large flocks between Wells 37 and 36 on 30 November 1943 and, when returning northwards on 4 January 1944, some flocks near Tobin Lake. On 6 May 1979 L.A. Smith saw a party of five fly into a desert oak near Tobin Lake; they then flew to the ground where Smith watched them feeding for some time; this could have been at the same patch of desert oaks as Buller's observations 36 years earlier; like Buller, Smith compared their chattering to that of budgerigars, though the notes were deeper and uttered more slowly.

The new parrot seen on 3 September 1861 by F.T. Gregory (Gregory & Gregory 1884: 80) in sandridge country east of the Gregory Range (ca 21°25'S, 121°25'E) was more likely to be this species than, as H.M. Whittell (1946: 295) suggested, the Mulga Parrot (*Platycercus varius*).

Platycercus zonarius zonarius (Shaw)

Ring-necked Parrot

Moderately common in relatively well-watered southwest, especially in river gums along watercourses, e.g. Rudall River and Talawana Creek; usually in pairs. Also in southwestern sector of Great Sandy Desert: on 1 January 1944 K.G. Buller saw a party of five feeding among desert oaks at Well 35; in 1896 G.A. Keartland (*in* North 1898: 170) found them in pairs and small flocks feeding on the ground or eating the green shoots of small plants around waterholes north to Separation Well, north of which none was seen.

Melopsittacus undulatus (Shaw)

Budgerigar

Common to very common; usually in small parties, occasionally in flocks of many hundreds. Mainly in better-watered country, but also in ordinarily waterless deserts when ephemeral water and *Triodia* and other grass seeds are available after good rains. Two breeding reports: J.H. Calaby found them nesting in tree-hollows on the Rudall in mid-September 1955; P. de Rebeira saw them entering eucalypt spouts at Wormys Well and at 38 km NE of Well 42 in mid-September 1978.

Nymphicus hollandicus (Kerr)

Cockatiel

Moderately common in relatively well-watered southwest, usually in pairs and small flocks; but generally scarce, and not recorded at all from east of Gregory Salt Lake, Well 41 and Kidson Airfield.

Calyptorhynchus magnificus (Shaw)

Red-tailed Black Cockatoo

Confined to extreme southwest. On 6 and 7 June 1971 J.R. Ford observed flocks of five and six near Old Talawana.

Cacatua roseicapilla Vieillot

Galah

Common in relatively well-watered southwest and along the Canning Stock

Route, usually in pairs or small flocks; rare in Gibson Desert; absent from northwestern sector of Great Sandy Desert, i.e. west of Joanna Spring and north of Callawa. Breeding in August and September: C/4(1); B/3(1).

Cacatua tenuirostris sanguinea Gould

Corella

In far northeast moderately common in flocks (up to 100) on lower Sturt Creek, around Gregory Salt Lake and at Balgo. Also recorded by K.G. Buller at Well 48 (a small flock flew over on 19 August 1943), and by J.H. Calaby on the Rudall in mid-September 1955.

Cacatua leadbeateri (Vigors)

Major Mitchell's Cockatoo

Mainly northeastern (not recorded from west of the McLarty Hills or south of Tobin Lake and Lake Mackay). Uncommon to moderately common near water; usually in pairs or small flocks (up to 15). At Labbi-labbi Rock-hole (south-east of Lake Hazlett) D.F. Thomson (1962: 151) found them feeding on native figs (*Ficus platypoda*). Near Godfrey Tank L.A. Smith and R.E. Johnstone watched them eat the fleshy centres of bloodwood galls. On 19 September 1978 P. de Rebeira saw one searching trees for a nesting spout at Well 45.

Cuculidae

Cuculus pallidus (Latham)

Pallid Cuckoo

Status uncertain (only one breeding record). Moderately common; usually single, occasionally in twos. Mulga and other arid scrubs. On 21 August 1973 R.E. Johnstone found an almost fledged juvenile in the nest of a *Meliphaga virescens* on the Sandy Blight track at 26 km W of Pollock Hills.

Chrysococcyx basalis (Horsfield)

Horsfield's Bronze Cuckoo

Status uncertain (no breeding records). Moderately common; usually single. Recorded in all kinds of woody vegetation from bloodwoods down to low shrubbery.

Strigidae

Tyto alba delicatula (Gould)

Barn Owl

Status uncertain, but evidently scarce. Between July and December 1943 K.G. Buller observed three single birds and a pair on the Canning Stock Route (Wells 48, 42, 41 and 35). In April 1979 L.A. Smith and R.E. Johnstone saw one on Aitchison Creek 9 km N of Pussycat Bore. In August 1976 P. de Rebeira found the remains of one at a pool on the Rudall.

Ninox novaeseelandiae boobook (Latham)

Boobook Owl

Status uncertain (no breeding records) but moderately common and apparently resident (judging from calling) in relatively well-watered and well-wooded northeast (Mt Bannerman, Sturt Creek, Gregory Salt Lake and Godfrey Tank) and southwest (Rudall River, Talawana, Coondra Coondra Spring and McKay Creek). Less plentiful and possibly only a winter visitor or passage migrant in more arid parts of region. A female (WAM A11756) collected by J.R. Ford at 24 km N of Windy Corner on 30 May 1971 was very fat; its stomach was crammed with grasshoppers.

Podargidae

Podargus strigoides (Latham)

Tawny Frogmouth

Status uncertain, but clearly rare; possibly resident in far southwest (J.R. Ford heard two calling at Old Talawana on night of 6 June 1971, and W.H. Butler collected a pair at 20 km SE of Jiggalong on 16 September 1972). The only other records are a specimen (WAM A3963) collected by O.H. Lipfert at Well 30 on 5 September 1930 and two seen in mulga on the Sahara track (21°30'S, 123°21'E) by P. de Rebeira and I. Rook on 17 August 1977.

Aegothelidae

Aegotheles cristatus cristatus (White)

Australian Owlet-nightjar

Confined to southern third of region, north to the Rudall, Well 24 and nearly to Lake Mackay. Moderately common in relatively well-wooded and well-watered southwest (Rudall River and Talawana). Uncommon elsewhere.

Two specimens from the vicinity of the Rudall belong to the dark southern race.

Caprimulgidae

Eurostopodus guttatus (Vigors & Horsfield)

Spotted Nightjar

Common and widespread. Open or sparsely wooded country, especially vicinity of stony areas suitable for daytime roosts and nesting. Attracted to fires and in hot weather to water (K.G. Buller watched them drinking on the wing like swallows on the Canning Stock Route in October and January). One breeding record: a small downy juvenile found by K.G. Buller near Well 42 on 4 October 1943. Calling reported in May and September.

Apodidae

Apus pacificus pacificus (Latham)

Fork-tailed Swift

Rare summer visitor. Two records: a specimen (WAM A3972) collected by O.H. Lipfert at Well 34 on 19 October 1930, and one collected by him at Well 48 on 15 March 1931 (SAM B15306).

Alcedinidae

Halcyon pyrrhopygia Gould

Red-backed Kingfisher

Common on heavier soils and in better-wooded country; scarce in sandy deserts. Breeding in August; C/4(1), 5(1).

Halcyon sancta sancta Vigors & Horsfield

Sacred Kingfisher

Restricted to southwestern watercourses (Rudall River and Talawana Creek). Observed in April, June and September. Scarce.

Meropidae

Merops ornatus Latham

Rainbow Bee-eater

Recorded at water in far north (Dragon-tree Soak, Gregory Salt Lake and Balgo Hill) and southwest (Rudall River and Talawana Creek). Presumably breeding at Gregory Salt Lake (recorded in April and November); status uncertain elsewhere (recorded in April, June and August). Common on the Rudall; scarce elsewhere.

Alaudidae

Mirafra javanica Horsfield

Horsfield's Bushlark

Confined to northeast (Lake Betty area, Gregory Salt Lake, Balgo and vicinity of Well 48), the Anketell Ridge (eastwards along the Kidson track to 146 km E of the Callawa turnoff) and the Rudall River; these populations are extensions of those of the Kimberley and Pilbara. Common; usually in ones or twos. Open short grasslands (Mitchell and other 'soft' grasses and *Triodia*); also samphire flats.

Hirundinidae

Cheramoeca leucosterna (Gould)

White-backed Swallow

Moderately common and presumably resident in south, north to the Sahara track, Tobin Lake and Sandy Blight track; usually in ones and twos. Uncommon in north and possibly only a non-breeding visitor (May-July). Breeding

reported from McKay Creek and Sandy Blight track (69 km W of Northern Territory border); August.

Hirundo neoxena Gould

Welcome Swallow

Status uncertain; apparently a rare autumn-winter visitor to far northeast. Only records are sightings by K.G. Buller at Old Billiluna in 1943: on 29 May he noted some around his camp; two days later he saw two at a claypan, and on the following day he observed one roosting on a case of food at his camp.

Hirundo nigricans nigricans Vieillot

Tree Martin

Confined to relatively well-watered and well-wooded southwest (Rudall and Oakover Rivers and Talawana Creek). Moderately common; usually in small parties. Vicinity of river gums along watercourses. On 5 June 1971 J.R. Ford saw seven entering hollows in river gums on Talawana Creek.

Hirundo ariel (Gould)

Fairy Martin

Widespread in spring and summer, judging from observations of old nests, but the birds themselves have only been reported on two occasions (late August and mid-September). One breeding record (September); nests located in groups of 12 to *ca* 200 in cliffs along breakaways and watercourses and in rocky hills.

Motacillidae

Anthus novaeseelandiae australis Vieillot

Richard's Pipit

Moderately common to common in relatively well-watered northeast and southwest; less plentiful in more arid parts of region, and especially scarce in sandy deserts; usually in ones or twos, occasionally in small parties. Samphire flats, grassy flats and edge of saltlakes and saltpans. On 7 June 1971 J.R. Ford observed several display flights over flats at Old Talawana.

Campephagidae

Coracina maxima (Rüppell)

Ground Cuckoo-shrike

Status uncertain; perhaps only a rare autumn-winter visitor. Four records: on 25 July 1943 K.G. Buller collected one of a party feeding on a stony rise near Well 48; on 7 June 1980 A.A. Burbidge and P.J. Fuller saw four in low open woodland over open short grass at 28 km N of Point Moody; on 27 May 1971 J.R. Ford saw one at Jupiter Well, and on 6 and 8 June 1971 he saw three at Old Talawana.

Coracina novaehollandiae subpallida Mathews **Black-faced Cuckoo-shrike**

Confined to relatively well-watered and well-wooded southwest, north to the Rudall (specimens from Coondegoon Pool and Talbot Soak) and east to McKay Creek (observations by J.R. Ford and G.M. Storr on 13 September 1966 at 56 and 76 km W of Well 23). Moderately common; usually in ones or twos. Mainly river gums.

Coracina novaehollandiae novaehollandiae (Gmelin)

Apparently resident in far northeast, judging by November observations on lower Sturt Creek and around Gregory Salt Lake. Elsewhere a moderately common passage migrant or winter visitor (April-September); in ones, twos or small parties (up to seven).

Lalage sueurii tricolor (Swainson)

White-winged Triller

Moderately common to common passage migrant, moving north in April and early May and south in August and early September. Also a scarce resident or breeding visitor, judging from observations on lower Sturt Creek and at Gregory Salt Lake, Well 41 and Well 35 between mid-October and mid-January, and at 48 km SW of Well 39 (where P. de Rebeira watched a female carrying food on 17 September 1978).

Pachycephalidae

Petroica goodenovii (Vigors & Horsfield)

Red-capped Robin

Status uncertain (no breeding records). Moderately common and presumably resident in south, north to about the Rudall, Separation Well, Jupiter Well and Dovers Hills; usually in ones or twos; mainly dense mulga, also thickets of wattle and teatree and groves of desert oak. Scarce and presumably only a non-breeding visitor (May-August) in north.

Petroica cucullata (Latham)

Hooded Robin

Mainly eastern, north and west to the Canning Stock Route; also southwest around the Rudall River, Talawana and Jiggalong. Moderately common in south, less plentiful in north; usually in ones or twos. Lightly wooded country (mulga, corkwood and wattle). One breeding report (G.A. Keartland *in* North, 1898: 175): nest and two eggs on 26 October 1896; however, the season probably begins much earlier in view of J.R. Ford's observation of a pair displaying and carrying food near Old Talawana on 9 June 1971.

Pachycephala rufiventris rufiventris (Latham)

Rufous Whistler

Moderately common in better-wooded country (i.e. far northeast, southwest and south), usually single; absent from sandy deserts. Mainly tall mulga; also

thickets of *Grevillea stenobotrya* and *G. wickhami*, teatrees and eucalypts.

Colluricincla harmonica harmonica (Latham)

Grey Shrike-thrush

Restricted to far northeast (lower Sturt Creek and Aitchison Creek). Scarce.

The holotype of *C. brunnea julietae* Mathews came from this population; it (and *brunnea*) were synonymized by Ford & Parker (1974, *Emu* 74: 187) with the nominate race.

Colluricincla harmonica rufiventris Gould

Only recorded from three areas: (1) the Rudall River, (2) around Jiggalong, and (3) northwestern corner of Gibson Desert, north to Kidson Bluff and west to 40 km W of Windy Corner. Common in river gums and adjacent thickets of mulga on the Rudall; elsewhere uncommon and mainly in dense mulga; in ones or twos.

Oreoica gutturalis (Vigors & Horsfield)

Crested Bellbird

Greater part of region but no records from far northeast (north of Well 48). Common to moderately common in south (north to the Rudall and Well 35); much less plentiful in north; usually in ones or twos. Mulga and other thickets.

Psophodes occidentalis (Mathews)

Western Wedgebill

Gibson and Tanami Deserts, north to Well 48 and west to Well 24. Moderately common in south (north to Well 35), scarce in north; usually in ones or twos. Thickets of mulga, wattle, teatree and *Grevillea* spp.

Monarchidae

Rhipidura fuliginosa alisteri Mathews

Grey Fantail

One record: a specimen collected by J.R. Ford (1971, *Emu* 71: 109) in a teatree thicket at Well 35 on 9 September 1966. The bird was presumably on its way back to south-eastern Australia after wintering in the Kimberley.

Rhipidura leucophrys leucophrys (Latham)

Willie Wagtail

Status uncertain (no breeding records). Apparently a very common passage migrant and winter visitor (April to early September); usually single, occasionally in small parties (up to six). Also an uncommon resident, judging by a few October-February records from Lake Gregory HS, Well 50, Well 49, Well 37, Bungabinni Well (10 km W of Well 36), Well 34 and the Rudall River.

Orthonychidae

Cinclosoma castaneothorax marginatum Sharpe

Chestnut-breasted Quail-thrush

Far west of Gibson Desert between Windy Corner and Well 24; also further west in the Throssel Range and around Talawana. Common; usually in pairs. Stony country with thickets of *Acacia* (especially mulga), *Eremophila*, *Grevillea* and *Cassia*.

The Chestnut Quail-thrush (*C. castanotum* Gould) possibly occurs in the region too. G.A. Keartland (*in* North 1898: 180) claims to have shot several birds about 40 miles south of Separation Well in September 1896 (Keartland evidently knew *C. c. marginatum* well; it was numerous in the rough stony country around the camel depot near Carnegie). On 23 August 1973 J.R. Ford and R.E. Johnstone flushed a bird with a bright chestnut back from beside the Sandy Blight track 22 km E of Gary Junction where the vegetation consisted of wattle and spinifex; the bird flew towards dunes clothed with *Thryptomene*, *Grevillea stenobotrya* and *Triodia* but could not be found again.

Pomatostomus temporalis rubeculus (Gould)

Grey-crowned Babbler

Far northeast (lower Sturt Creek and Gregory Salt Lake) and extreme southwest (around Talawana). Scarce; in small parties. Apparently breeding in winter; a female, one of three birds at a nest in a river gum on the Oakover, had large ova and a large oviduct on 9 June 1971 (J.R. Ford, pers. comm.).

Pomatostomus superciliosus (Vigors & Horsfield)

White-browed Babbler

Far southeast and central south, i.e. Gibson Desert north to Well 35 and west to 48 km W of Windy Corner. Moderately common around Windy Corner; uncommon elsewhere; in pairs or small parties (up to eight). Mainly copses of tall dense mulga, also thickets of wattle and teatree (*Melaleuca glomerata*).

Acanthizidae

Aphelocephala nigricineta (North)

Banded Whiteface

Eastern and southern, north to Gregory Salt Lake and west to Well 48, 49 km NW of Swindell Field and Old Talawana. Common in Gibson Desert, scarce or uncommon elsewhere; usually in pairs or small parties (up to 10). Open shrubbery (including samphire) mainly on heavy soils. Breeding from April to September: C/1(3), 2(5), 3(1); nesting mostly in corkwoods (*Hakea* spp.).

Gerygone fusca mungi Mathews

Western Flyeater

Southeastern, i.e. Gibson Desert west to Jupiter Well. Scarce; in ones or

twos. Mallee (including *Eucalyptus kingsmillii*) and desert oaks. Apparently breeding in winter; on 27 May 1971 J.R. Ford collected a pair at Jupiter Well that were engaged in display and copulation.

Gerygone fusca fusca (Gould)

Only certainly recorded from far southwest; identification based on a specimen collected on 23 August 1972 by W.H. Butler in sparse mulga at Curran Curran Rock-hole, on two specimens collected on 24 April 1979 by A.N. Start *et al.* in a mulga thicket 86 km E of Old Talawana, and on birds heard and seen by J.R. Ford in acacias and river gums along Talawana Creek on 7 and 8 June 1971. Status uncertain; perhaps only an uncommon autumn-winter visitor.

Smicrornis brevirostris (Gould)

Weebill

One record from far northeast: two birds observed on 27 April 1979 by P.J. Fuller *et al.* at Lens Bore, Gregory Salt Lake. Two records from far southwest: a single bird observed on 3 June 1971 by J.R. Ford in a white gum near the Emu Range, 116 km E of Old Talawana, and three observed by W.H. Butler at 20 km SE of Jiggalong on 14 September 1972.

Pyrholaemus brunneus Gould

Redthroat

Southern, north to Well 35 and west to the Talawana track (72 km W of Well 23). Uncommon; usually in pairs. Thickets of mulga, wattle and teatree. Apparently breeding in winter; on 31 May 1971 J.R. Ford observed a male displaying.

Acanthiza apicalis Gould

Broad-tailed Thornbill

Eastern and southern, north to Well 41 and west to Lake Auld and Hanging Rock. Uncommon; usually in pairs. Mainly thickets of teatree (*Melaleuca lasiandra* and *M. glomerata*).

Acanthiza robustirostris Milligan

Slaty-backed Thornbill

Far south, west to Well 24. Moderately common; usually in pairs or family parties. Thickets of mulga and other acacias.

Acanthiza uropygialis Gould

Chestnut-rumped Thornbill

Only reported from two areas in extreme south: (1) around Old Talawana and Jiggalong and (2) at 42 km W of Windy Corner. Uncommon; in pairs or family parties. Thickets of mulga and other acacias. Apparently breeding in winter: on 8 June 1971 J.R. Ford watched a pair displaying and a bird collecting spider web for a nest in a hole in a mulga at 6 km W of Old Talawana.

Sericornis fuliginosus campestris (Gould)

Calamanthus

Patchily distributed in southwest, northeast to Lake Auld (22°30'S, 123°51'E). Uncommon; in ones, twos or small parties (up to five). Low dense shrubbery (including samphire) and spinifex.

Maluridae

Amytornis striatus whitei Mathews

Striated Grasswren

Southern and eastern, north to the Sahara track and Well 48. Common in southeast, scarce to moderately common elsewhere; usually in pairs or family parties. Spinifex, especially dense hummocks intermixed with herbage and low shrubs. Breeding reported in July and October; C/2(2).

Malurus lamberti assimilis North

Variegated Fairy-wren

Common; in pairs or small parties (up to five). All kinds of thicket and shrubbery. Breeding in July and August.

Malurus leucopterus leuconotus Gould

White-winged Fairy-wren

Greater part of region but not far northwest, west of Joanna Spring and the Anketell Ridge (20°53'S, 122°04'E). Very common; usually in small parties (up to six). Low vegetation: spinifex, herbage, shrubbery and samphire. Breeding in August and September; C/3(1).

Stipiturus ruficeps ruficeps Campbell

Rufous-crowned Emu-wren

Southern and eastern, north to Lake Auld (22°27'S, 123°53'E) and Well 48. Uncommon in south, scarce in north; usually in pairs or small parties. Spinifex and low shrubbery.

Sylviidae

Acrocephalus stentoreus australis (Gould)

Clamorous Reed Warbler

One record: at least four were noted by N.L. McKenzie at Dragon-tree Soak on 10 August 1977; one of them was collected (WAM A15106).

Eremiornis carteri North

Spinifex-bird

Five records from central west. On 16 May 1979 A.N. Start *et al.* saw one in spinifex and shrubbery (*Grevillea* and *Acacia*) along a drainage line on the Anketell Ridge (20°15'S, 121°44'E); on 10 May 1979 they collected a specimen (WAM A16144) in rank spinifex with scattered shrubs (*Hakea* and *Acacia*) on sand near Lake Auld (22°27'S, 123°56'E). On 2 August 1974 N. Ives found it nesting on the 'Sahara track, about 150 miles southeast of the Great Northern

Highway'; on the following day he saw one near Kidson Airfield. On 13 August 1976 P. de Rebeira saw one in spinifex on a gravelly ridge 8 km SW of Well 33.

Cincloramphus mathewsi Iredale

Rufous Songlark

Status uncertain; perhaps mainly a passage migrant (April-May and August-September). Moderately common in good years, e.g. along the Sandy Blight track in August 1973, but generally rare.

Cincloramphus cruralis (Vigors & Horsfield)

Brown Songlark

Moderately common; usually single. Short open grasses (occasionally including spinifex), low shrubbery regenerating after fire, and samphire. Song and display noted in early June.

Daphoenosittidae

Daphoenositta chrysoptera pileata (Gould)

Australian Sittella

Far south, north to Well 35. Uncommon; usually in small parties (up to 12). Mainly tall mulga; also desert oaks. Breeding in July, judging from fledgelings observed on 20 August 1973 by R.E. Johnstone near Dovers Hills.

Dicaeidae

Dicaeum hirundinaceum hirundinaceum (Shaw)

Mistletoebird

Moderately common in relatively well-wooded northeast and southwest, scarce or absent in sandy deserts; usually single, occasionally in twos.

Pardalotidae

Pardalotus rubricatus Gould

Red-browed Pardalote

Uncommon to moderately common in relatively well-watered and well-wooded northeast (e.g. Gregory Salt Lake and South Esk Tablelands) and southwest (e.g. Talawana and McKay Creeks, but strangely not recorded from the Rudall), scarce or uncommon elsewhere; usually in ones or twos. Mainly river gums and other eucalypts along watercourses and drainage lines; also bloodwoods on dunes. One breeding report; August.

Pardalotus striatus substriatus Mathews

Striated Pardalote

Autumn-winter visitor (May-September). Uncommon in southwest, north to the Rudall and east to Well 24; rare elsewhere (recorded at Well 45 and Dovers Hills); usually single, one party of six. River gums along watercourses and bloodwoods on dunes.

Meliphagidae

Lichmera indistincta indistincta (Vigors & Horsfield) **Brown Honeyeater**

Patchily distributed (largely confined to gullies in hills and breakways). Locally common, but generally scarce; in ones, twos or small parties. Thickets in relatively well-watered places; attracted to flowering shrubs and trees (*Grevillea wickhami*, *G. refracta*, *G. eriostachya*, bloodwoods and *Melaleuca lasiandra*). Apparently breeding in winter.

Certhionyx niger (Gould) **Black Honeyeater**

Nomadic. Locally and seasonally common (e.g. at Well 41 in late October 1943 and in parts of the Anketell Ridge in mid-May 1979), but generally uncommon; in ones, twos or small parties. Attracted to flowering shrubs and trees (*Grevillea wickhami*, *G. refracta*, *Hakea lorea*, *Acacia* spp. and bloodwoods). Two breeding reports: August and September; C/1(1).

Certhionyx variegatus Lesson **Pied Honeyeater**

Nomadic. Locally and seasonally common, e.g. at Well 41 in October 1943, but generally uncommon; in ones, twos or small flocks (up to 16). Attracted to flowering trees and shrubs (bloodwoods, *Grevillea wickhami*, *G. refracta* and *Acacia* spp.).

Meliphaga virescens (Vieillot) **Singing Honeyeater**

Widespread and very common; usually in ones or twos, occasionally aggregating in small flocks (up to eight) at extraordinary sources of nectar. Small thickets of shrubs and copses of trees in otherwise lightly wooded country; attracted to flowering shrubs and trees (*H. lorea* and other hakeas, *Melaleuca glomerata*, *Grevillea wickhami*, *G. refracta* and bloodwoods). Breeding from June to August; C/2(1); parasitized by *Cuculus pallidus*.

Meliphaga keartlandi (North) **Grey-headed Honeyeater**

Widespread and common; in ones, twos or small flocks (up to 12). Mainly eucalypt scrubs and woodlands (bloodwoods, *E. kingsmillii* and other mallees, *E. papuana* and *E. aspera*) but attracted to other shrubs and trees when flowering (e.g. *Grevillea wickhami*, *G. refracta*, *Hakea lorea* and *Melaleuca glomerata*). Breeding in July and August; B/2(2).

Four records of the Yellow-fronted Honeyeater, *M. plumula* (Gould), were possibly based on imperfect sightings of this species.

Meliphaga penicillata Gould **White-plumed Honeyeater**

Northeastern, west to Lake Betty and south to South Esk Tablelands (Mt

Ernest and Well 50); southwestern, north to the Rudall and east to McKay Creek; and patchily distributed in Gibson Desert (recorded at Wormys Well and vicinity and on the Sandy Blight track 69 km W of Northern Territory border). Common in relatively well-watered northeast and southwest; usually in small parties. Mainly river gums; attracted to flowering bloodwoods, *Hakea lorea* and *Grevillea wickhami*. One breeding report; May.

Melithreptus gularis laetior Gould

Black-chinned Honeyeater

Mainly northeastern, south and west to Well 45; also patchily distributed further south (92 km E of Old Talawana, Well 30 and 39 km W of Pollock Hills). Uncommon; usually in pairs and small parties. Mostly river gums and other waterside vegetation; also other eucalypts (bloodwoods and mallees) and attracted to flowering *Grevillea refracta*.

Phylidonyris albifrons (Gould)

White-fronted Honeyeater

Widespread, but no records from northeast, i.e. north and east of Well 35 (however, it has been recorded in adjacent parts of southeast Kimberley). Winter visitor (April-September) in highly variable numbers. Very common in some winters, e.g. along the Sandy Blight and Talawana tracks in 1971, but generally uncommon to moderately common; in ones, twos or small flocks (up to 20). Attracted to flowering shrubs and trees: *G. wickhami*, *G. refracta*, *G. stenobotrya*, *G. eriostachya* and other grevilleas, *H. lorea* and other hakeas, *E. kingsmillii* and other eucalypts (especially bloodwoods), *M. glomerata* and other melaleucas, and *Acacia* spp. Breeding in July and August; C/2(1).

Manorina flavigula (Gould)

Yellow-throated Miner

Widespread, but no records from northeast, i.e. north of lat. 21°S (however, it has been recorded in adjacent parts of southeast Kimberley). Common in relatively well-watered and well-wooded southwest, north to the Rudall and east to Well 24; uncommon elsewhere; usually in pairs or small flocks (up to 20). Mainly eucalypt woodland (river gums, bloodwoods, *E. kingsmillii* and *E. papuana*); also desert oaks, mulga and other acacias, and cajaputs; attracted to flowering *Grevillea refracta*, *G. wickhami* and *Hakea lorea*.

Acanthagenys rufogularis Gould

Spiny-cheeked Honeyeater

Uncommon to moderately common in south, scarce or absent in north; usually in ones, twos or small parties (up to 16 birds observed drinking together). Mainly mulga and other acacia scrubs, also bloodwoods and melaleuca thickets; attracted to flowering hakeas and grevilleas.

Epthianura aurifrons Gould

Orange Chat

Patchily distributed: recorded from Gregory Salt Lake, Lake Auld and

claypans 14 km SSW of Well 25. Common (at least around Gregory Salt Lake); usually in small parties. Samphire.

Epthianura tricolor Gould

Crimson Chat

Nomadic. Moderately common to very common—more numerous in wet years (e.g. 1971) than dry, and in south than north; usually in ones, twos or small parties, occasionally in flocks of 80 or more. Lightly wooded country, especially post-fire regeneration and flats with fresh grass and herbage; attracted to flowering *Grevillea wickhami*, *G. refracta*, *G. eriostachya* and *Hakea lorea*. Breeding north to Kidson Airfield; June to September.

Ploceidae

Emblema pictum Gould

Painted Finch

Widespread but patchily distributed. Moderately common; usually in pairs or small parties, sometimes in hundreds at water. Mainly spinifex in stony gullies and hills; also locally in sandy deserts, e.g. Joanna Spring. Breeding from May to August.

Poephila guttata castanotis (Gould)

Zebra Finch

Very common in relatively well-watered northeast and southwest, moderately common to common elsewhere; usually in small flocks, sometimes in thousands at water. Lightly wooded country with spinifex and other grasses in vicinity of water. Breeding from March to September; C/1(1), 2(3), 3(3), 4(2), 5(2), 6(1), 7(1).

Grallinidae

Grallina cyanoleuca (Latham)

Magpie-lark

Confined to relatively well-watered northeast (Lake Betty area, lower Sturt Creek, Gregory Salt Lake and Balgo) and southwest (Rudall River and Talawana). Common; usually in pairs. Lightly wooded country in vicinity of water. Two breeding records from the Rudall; August.

Artamidae

Artamus personatus (Gould)

Masked Woodswallow

Nomadic. Widespread. Moderately common to very common; usually in small flocks, occasionally in thousands. Lightly wooded country; attracted to flowering trees and shrubs, especially bloodwoods, but also *Grevillea wickhami*, *G. refracta*, *G. eriostachya* and *Hakea lorea*. Breeding in August.

G.A. Keartland (*in* North 1898: 172) also noted the White-browed Wood-

swallow, *Artamus superciliosus* (Gould), in the desert but it is uncertain whether this was north or south of the Tropic.

Artamus cinereus melanops Gould

Black-faced Woodswallow

Very common (the widest-spread and most abundant bird in the region); usually in ones, twos or small parties, occasionally in small flocks (up to 40). Lightly wooded country. Breeding in August and September; C/3(2).

Artamus minor Vieillot

Little Woodswallow

Patchily distributed in west, north to the Anketell Ridge (107 km WNW of Swindell Field) and east to the Rudall River and Emu Range. Scarce; usually in small parties. About cliffs and breakaways.

Cracticidae

Cracticus torquatus torquatus (Latham)

Grey Butcherbird

Patchily distributed in western part of extreme south: recorded from Old Talawana, Well 24, and 24 and 42 km N of Windy Corner. Scarce; in ones or twos. Tall dense mulga.

Cracticus nigrogularis (Gould)

Pied Butcherbird

Northeastern, south and west to South Esk Tablelands (Breaden Valley). Western and southern, north to the Anketell Ridge, Kidson Bluff, Pollock Hills and Dovers Hills. Moderately common; in ones or twos. Mainly hard country where runoff from hills and breakaways favours scattered tall eucalypts; absent from sandy deserts. One breeding report: October; C/2.

Cracticus tibicen tibicen (Latham)

Australian Magpie

Only recorded from two small areas in far south: (1) the Buck Hills (Sandy Blight track at 11 and 19 km W of Northern Territory border), and (2) the Harbutt and McKay Ranges (Talawana track at 21, 58 and 68 km W of Well 23). Scarce.

Corvidae

Corvus orru salvadorii Finsch

Australian Crow

Southern and eastern, i.e. absent from most of Great Sandy Desert. Moderately common in relatively well-watered and well-wooded northeast (southwest to South Esk Tablelands) and southwest (north to the Rudall and east to McKay Creek), scarce or uncommon elsewhere; in ones, twos or small parties. Wooded country in vicinity of water with moderately tall eucalypts suitable for nesting in. One breeding report: July; C/4.

Not much can be said about the two *Corvus* spp., for most crows are not identified to species. *C. orru* has been collected at Well 48 and Talbot Soak (Rudall River), and *C. bennetti* at Wells 47, 44 and 39.

Corvus bennetti North

Little Crow

Southern and eastern, i.e. absent from most of Great Sandy Desert. Uncommon to moderately common; in ones, twos or small flocks (up to 30). Wooded country in vicinity of water. One breeding report: August.

DISCUSSION

In the table below, the birds of the region are enumerated according to ecological status.

	non-passerine	passerine	total
residents	31	56	87
breeding visitors	7	0	7
non-breeding visitors	46	4	50
passage migrants	1	2	3
vagrants	1	0	1
total	86	62	148

148 species is a very low total for a region that has an area (480,000 sq. km) more than twice that of the State of Victoria. Even so, the total would have been much less but for the inclusion within the region of certain peripheral areas.

The well-watered far northeast, especially Gregory Salt Lake, contributed 28 non-passerines and 2 passerines that are not recorded from elsewhere in the region. The relatively well-wooded and well-watered southwest contributed 3 non-passerines and 2 passerines unrecorded elsewhere. A further 13 non-passerines and 6 passerines, shared by the far northeast and far southwest, do not extend to the more arid parts of the region.

The far northeast and far southwest are essentially extensions of the Kimberley and Pilbara regions. If we subtract the 43 non-passerines and 6 passerines regionally confined to them, we are left with the 43 non-passerines and 56 passerines that inhabit or visit the truly desert country. Of these, 4 non-passerines and 9 passerines are restricted to the far south, especially the mulga thickets of the Gibson Desert.

The Great Sandy Desert, which constitutes the major part of the region, thus has an avifauna of fewer than 90 species. This poverty reflects the extreme harshness of the environment. No other part of Australia is so inimical to

birdlife as this land of great summer heat and little or no surface water.

GAZETTEER

Co-ordinates for watercourses are taken at their termination, sheep and cattle stations at their homestead, other features at their centre.

Aitchison Creek 20°21'S, 128°36'E
Anketell Ridge 20°30'S, 122°30'E

Balgo Mission Station 20°09'S, 127°57'E
Billiluna Station 19°34'S, 127°40'E
Bishops Dell 20°41'S, 127°33'E
Breaden Valley 20°17'S, 126°32'E
Buck Hills 23°09'S, 128°54'E
Bulbi Plain 20°16'S, 127°20'E

Callawa Station 20°38'S, 120°30'E
Callawa turnoff 20°06'S, 121°09'E
Carnegie Station 25°47'S, 122°58'E
Coondegoon Pool 22°28'S, 122°31'E
Coondra Coondra Spring 23°07'S, 121°02'E
Curran Curran Rock-hole 22°32'S, 121°56'E

Djaluwon Creek 20°17'S, 127°26'E
Dovers Hills 23°07'S, 128°40'E
Dragon-tree Soak 19°40'S, 123°21'E

Emu Range 22°57'S, 122°12'E

Gary Junction 22°30'S, 125°15'E
Godfrey Tank 20°14'S, 126°35'E
Gravity Lakes 20°52'S, 126°05'E
Gregory Range 21°25'S, 121°14'E
Gregory Salt Lake 20°13'S, 127°27'E

Hanging Rock 22°30'S, 121°40'E
Harbutt Range 22°55'S, 122°50'E

Jiggalong 23°21'S, 120°47'E
Joanna Spring 20°06'S, 124°11'E
Jupiter Well 22°53'S, 126°36'E

Kidson Airfield 22°43'S, 125°08'E
Kidson Bluff 22°15'S, 125°04'E
Kunningarra Rock-hole 20°15'S, 126°34'E

Labbi-labbi Rock-hole 21°34'S, 128°49'E
Lady Edith Lagoon 20°36'S, 127°14'E
Lake Auld 22°35'S, 123°45'E
Lake Betty 19°32'S, 126°20'E
Lake Hazlett 21°30'S, 128°38'E
Lake Gregory Station 20°09'S, 127°35'E
Lake Mackay 22°25'S, 128°50'E
Lens Bore 20°15'S, 127°30'E
Lera Waterhole 20°10'S, 127°24'E

McKay Creek 23°04'S, 122°52'E
McKay Range 23°00'S, 122°30'E
McLarty Hills 19°28'S, 123°33'E
Mt Bannerman 19°28'S, 127°11'E
Mt Ernest 20°10'S, 126°34'E

Oakover River 20°42'S, 120°33'E
Old Billiluna 19°40'S, 127°35'E
Old Talawana 22°50'S, 121°10'E

Percival Lakes 21°20'S, 124°40'E
Picture Hill 21°40'S, 123°50'E
Point Moody 21°15'S, 127°47'E
Poisonbush Range 22°48'S, 121°39'E
Pollock Hills 22°50'S, 127°33'E
Pussycat Bore 20°21'S, 128°36'E

Rudall River 22°10'S, 123°00'E

Savory Creek 23°21'S, 122°40'E
Separation Well 22°52'S, 124°00'E
South Esk Tablelands 20°30'S, 126°35'E
Sturt Creek 20°13'S, 127°23'E
Swindell Field 21°07'S, 123°27'E

Talawana Creek 22°45'S, 121°08'E
Talawana Station 22°57'S, 121°12'E
Talbot Soak 22°32'S, 122°24'E
Telfer 21°43'S, 122°14'E

Throssel Range 21°55'S, 121°45'E

Tobin Lake 21°45'S, 125°40'E

Well 23 23°05'S, 123°13'E

Well 24 23°07'S, 123°20'E

Well 25 22°59'S, 123°24'E

Well 30 22°30'S, 124°08'E

Well 31 22°32'S, 124°24'E

Well 33 22°20'S, 124°44'E

Well 34 22°16'S, 124°54'E

Well 35 22°13'S, 125°03'E

Well 36 22°09'S, 125°16'E

Well 37 22°09'S, 125°27'E

Well 39 21°46'S, 125°38'E

Well 40 21°40'S, 125°48'E

Well 41 21°34'S, 125°51'E

Well 42 21°19'S, 125°53'E

Well 43 21°12'S, 125°58'E

Well 45 20°48'S, 126°11'E

Well 48 20°15'S, 126°31'E

Well 50 20°13'S, 126°59'E

Wiluna 26°35'S, 120°14'E

Windy Corner 23°34'S, 125°11'E

Wormys Well 23°02'S, 125°11'E

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